

Development of Hanford Integrated Safety Management System and Chemical Management Strategy

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Brief Background

■ Old Mission

- Nuclear Weapons Material Production
 - Primarily Plutonium
- National Laboratory Research
 - Support of Weapons Program Focus

■ New Mission

- Environmental Clean Up Program
- National Laboratory Research
 - Clean Up Technology Focus

Chemicals At Hanford

■ Product Chemicals

– from Old Mission

- Unused Bulk Process Chemicals
- Research Related Chemicals
- Cleaning and Degreasing Chemicals

– from New Mission

- Chemicals Used for Flushing Old Systems
- Cleaning and Degreasing Chemical
- Chemicals Used for Treatment of Wastes

Chemicals At Hanford

■ Hazardous Waste

– from Old Mission

- Unused Chemicals with No Future Use
- Liquid & Solid Wastes in Tank Storage
- Liquid & Solid Wastes in Container Storage
- Chemicals Left in Old Process Systems
- Disposed Chemicals

Chemicals At Hanford

■ Hazardous Waste

- from New Mission
- Chemicals Used in Research
- Chemicals Used in Waste Treatment
- Chemicals in Wastes Being Cleaned Up

Chemical Management Strategy Drivers

- Large Inventories of Product & Waste Chemicals
- Need to Demonstrate Responsible Management of Chemicals
- Protection of Public, Workers & Environment
- Need to Comply with Regulations & Orders

Chemical Regulation

- Most Environmental Laws Focus on Chemical Management
 - RCRA, CERCLA, TSCA, CWA, CAA, etc.
- Hanford Activities Very Closely Regulated
 - Washington Department of Ecology
 - Washington Department of Health
 - US Environmental Protection Agency

Chemical Regulation

- DOE Self-Regulated for Health & Safety
- Health & Safety Requirements are Primarily Defined Through DOE Orders & Directives
 - DOE Order 440.1
 - DOE Order 5480.4
 - DOE Order 5480.19
 - DOE Order 5480.22
 - DOE Order 5480.23

Hanford Approach

- Hanford has a very clear need for a solid, well-defined chemical management strategy to ensure safe management of all product and waste chemicals
- Chemical Management Strategy logically must be part of overall Environmental & Safety Management System

Hanford Approach

- DOE Moving Away from Orders & Directives
- Moving to Use Same Standards as Private Industry

Hanford Approach

- No Consensus on Which Standards
- Many Alternatives, Many Advocates
 - ISO 14001 Environmental Management System (EMS)
 - CMA Responsible Care (RC)
 - Enhanced Work Planning (EWP)
 - OSHA's Voluntary Protection Program (VPP)
 - DOE Integrated Safety Management System (ISMS)

Hanford Approach

■ Initiative Conundrum

- Can't Do Them All
- Can't Do Just One, Ignore the Rest
- Can't Do Uncoordinated Pieces

■ One Logical Solution

- Pick the Best Elements and Integrate Into One Single System

Hanford Approach

- Foundation of All is Simple & Logical
 - Clearly Identify The Task
 - Carefully Plan Actions To Accomplish Task
 - Execute Action According to Plan
 - Review Action
 - Identify Improvements

Hanford Approach

- All Include Similar Concepts
 - Clearly Stated ES&H Policies
 - Management Commitment & Involvement
 - Worker Involvement in Planning
 - Public & Stakeholder Involvement
 - Commitment of Continual Improvement
 - Good Internal & External Communications

Hanford Approach

- PHMC Contract Requires EMS, RC, & VPP
- HQ Requiring ISMS
- Decision Made to Combine Best Elements of All, Using ISO 14001 & ISMS As Templates.
- Working Group of ES&H Experts Empaneled To Prepare Integrated Plan

Hanford Approach

- Preparing The Integrated Plan
 - Organizational Jealousies
 - ES&H Interdiscipline Jealousies
 - Many Issues
 - What Do We Call The Plan?
 - How Do We Define Terms?
 - Different Technical Jargon
 - Scope Of Plan - Site-wide, Activity
 - Areas of Focus
 - Different Audiences

Hanford Approach

- Progress In Spite of Controversy
- Compromise
 - Call it ISMS
 - Address “E” & “S&H” Elements Equally
- Approaching Final Draft

Hanford Approach

■ Approaching Most Difficult Activity

- Get The Real Users To Buy In
 - Program & Project Managers Must Use It
 - “I Have A Project Management System!”
 - If It Ain’t Broke, Don’t Fix It

■ “Stealth” Approach

- Don’t Push Complex System Plan
- Promote The Fundamental Elements
- Good Ideas Sell Themselves

Hanford Approach

■ Current Chemical Management Status

– Varies

■ Some Good

- Battelle Has Good Chemical Tracking System
- Chemical Inventories Being Reduced

■ Some Not So Good

- PRF Tank 109-A Blew Up
- Status of Process Vessel Contents Uncertain
- Waste Tanks Leaking

Hanford Approach

- Chemical Management Strategy
 - Chemical Safety Part of Overall Environmental, Safety & Health Program
 - ISMS Defines ES&H Program Policies, Expectations, & Guidelines
 - Line Program & Project Managers Expected to Work Within the Guidelines
 - Specifics Will Depend On Situation